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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/575,929	04/14/2006	Klaus Schultes	285437US0PCT	7074

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EXAMINER	
REDDY, KARUNA P	

ART UNIT	PAPER NUMBER
1713	

NOTIFICATION DATE	DELIVERY MODE
05/21/2007	ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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Office Action Summary	Application No.	Applicant(s)	
	10/575,929	SCHULTES ET AL.	
	Examiner	Art Unit	
	Karuna P. Reddy	1713	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☐ Responsive to communication(s) filed on _____.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *24-46* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *24-46* is/are rejected.

7)☒ Claim(s) *24, 38* is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☒ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date *7/13/2006*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

1. It is noted that applicant did not provide an English translation of the foreign priority application (Germany 103 49 144.9).

2. Preliminary amendment filed on April 14, 2006 is made of record. Claims 1-23 are cancelled, claims 24-46 are pending in the application.

Claim Objections

3. Claims 24 and 38 are objected to because of the following informalities: Claim 24 recites ".... mixture .... (meth)acrylate ..... **and/or** of a (meth)acrylamide ...." and should read ".... mixture .... (meth)acrylate .... **and** of a (meth)acrylamide ...." in light of it being a mixture. Claim 38 does not limit claim 36 further and appears to be dependent on claim 37. Appropriate correction is required.

EXAMINER'S AMENDMENT

4. An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the payment of the issue fee.

Authorization for this examiner's amendment was given in a telephone interview with Frederick Vastine on May 11, 2007.

Claim 43 is amended as follows: "An injection moulding, capable of production according to the process of claim 42."

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

6. The factual inquiries set forth in *Graham* **v.** *John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

7. Claims 24-37, 39, 42-46 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kress et al (US 4,895,898) in view of Suetterlin (US 4,513,118) and Lichtenstein et al (US 5, 621, 028).

Kress et al disclose a thermoplastic molding material containing (B) 10 to 60 parts by weight of one or more graft polymers composed of (B.1) 5 to 90 parts by weight of a mixture of (B.1.1) 50 to 95% by weight of styrene, methyl methacrylate or mixtures thereof (B.1.2) 50 to 5% by weight of methyl methacrylate, maleic anhydride or mixtures thereof and (C) 10 to 70 parts by weight of a thermoplastic copolymer having an intrinsic viscosity of 20 to 110 ml/g and formed from (C.1) 50 to 95% by weight of styrene, methyl methacrylate or mixtures thereof and (C.2) 50 to 5% by weight of methyl methacrylate, maleic anhydride or mixtures thereof and (D) 0.5 to 7.5 parts by weight of a copolymer formed from (D.1) 0 to 90% by weight of styrene, methyl methacrylate or mixtures thereof and (D.2) 100 to 10% by weight of methyl methacrylate, maleic anhydride or mixtures thereof and component (D) has an intrinsic viscosity of 2 to 10 ml/g (column 1, lines 7-46). It is noted that viscosity is a function of molecular weight of the polymer.

The mixtures may contain customary additives such as mould releasing agents (column 6, lines 46-47). The moulding material can be used to produce shaped articles by injection moulding. Examples of shaped articles for example include house hold equipment, components for automotive industry, computer casing and the moulding material is also employed in the field of electrical engineering (column 7, lines 1-10)

The prior art of Kress et al is silent with respect to impact modifier and plastics particles of claim 24, properties of the composition in claims 24, 30 and

44-45, impact modifier having a two or three shell structure of claim 26, and the percentages of various copolymers of claim 31.

However, Suetterlin et al teach an emulsion polymer, said polymer being useful as an impact strength modifying agent which, in admixture with a thermoplastic polymethyl methacrylate molding compound yields molded articles exhibiting reduced susceptibility to stress whitening and improved impact strength (abstract). The basic structure of polymers comprises a hard, nonelastomeric core, an elastomeric intermediate stage and a hard nonelastomeric final stage. It is hypothesized that the polymers of intermediate and final stage are disposed about the core in the manner of a shell (column 1, lines 14-19). Furthermore Lichtenstein et al teach polymethacrylate molded articles with polystyrene as light-scattering agent to render them translucent rather than transparent (column 1, lines 13-15). The polymer particles are spherical in shape having a diameter of 1-20 μm and generally present in an amount of 0.05 to 10 wt% (column 3, lines 3-7). Therefore, it would have been obvious to one skilled in the art at the time invention was made to add the impact modifier polymer of Suetterlin et al and crosslinked polystyrene of Lichtenstein et al, to the molding material of Kress et al and realize the above mentioned advantages.

As to the properties recited in claims 24, 30 and 44-45, in light of the fact that the composition comprises substantially similar wt% as that of the instant invention, one of ordinary skill in the art would have a reasonable basis to believe

that the composition would exhibit similar property(ies). Since PTO cannot conduct experiments, the burden of proof is shifted to the applicants to establish an unobviousness difference. See In re Best, 562 F.2d 1252, 195 USPQ 430 (CCPA 1977). Furthermore, when the claimed compositions are not novel they are not rendered patentable by recitation of properties, whether or not these properties are shown or suggested in the prior art. See In re Spada, 911 F. 2d 705, 709, 15 USPQ 1655, 1658 (Fed. Cir. 1990).

As to claim 31, it is well known in the art that polymers with low viscosity have good flow and excellent processibility while polymers with high viscosity provide for rigidity. It is held that where the general conditions of a claim are disclosed in the prior art, it is not inventive to discover the optimum or workable ranges by routine experimentation. See In re Antonie, 559 F.2d 618, 195 USPQ 6 (CCPA 1977). See also In re Boesch, 617 F.2d 272, 205 USPQ 215 (CCPA 1980). See also Peterson, 315 F. 3d at 1330, 65 USPQ 2d at 1382 ("The normal desire of scientists or artisans to improve upon what is already generally known provides the motivation or desire to determine where in a disclosed set of percentage ranges is the optimum range of percentages). Therefore, it would have been obvious to one skilled in the art at the time invention was made to alter the proportions of various components in the composition of Kress et al in view of Suetterlin as a matter of routine optimization and arrive at the instant invention in the absence of criticality or unexpected results.

8. Claim 38 is rejected under 35 U.S.C. 103(a) as being unpatentable over Kress et al (US 4, 895, 898) in view of Suetterlin et al (US 4, 513, 118) and Lichtenstein et al (US 5, 621, 028) as applied to claims 24 and 30 above, and further in view of Suzuki et al (US 2002/0099135 A1).

The discussion with respect to Kress et al in view of Suetterlin et al and Lichtenstein et al in paragraph 7 is incorporated herein by reference.

The prior art is silent with respect to the copolymerizaion of 95 to 99.5% by weight of methyl methacrylate with 0.5 to 5% by weight of methyl acrylate, ethyl acrylate and/or butyl acrylate.

Suzuki et al teaches a molding composition where suitable comonomers include methyl acrylate, ethyl acrylate and methyl methacrylate. Therefore, it would have been obvious to one skilled in the art at the time invention was made to add methyl acrylate and/or ethyl acrylate to the composition of Kress et al in view of Suetterlin et al and Lichtenstein et al because Suzuki et al has proven successfully the utilization of methyl acrylate and/or ethyl acrylate as a comonomer in the molding compositions and one of ordinary skill in the art would expect the comonomer methyl acrylate and/or ethyl acrylate to work for the composition of Kress et al in view of Suetterlin et al and Lichtenstein et al, motivated by expectation of success.

As to the percentages, it is held that where the general conditions of a claim are disclosed in the prior art, it is not inventive to discover the optimum or workable ranges by routine experimentation. See In re Antonie, 559 F.2d 618,

195 USPQ 6 (CCPA 1977). See also In re Boesch, 617 F.2d 272, 205 USPQ 215 (CCPA 1980). See also Peterson, 315 F. 3d at 1330, 65 USPQ 2d at 1382 ("The normal desire of scientists or artisans to improve upon what is already generally known provides the motivation or desire to determine where in a disclosed set of percentage ranges is the optimum range of percentages). Therefore, it would have been obvious to one skilled in the art at the time invention was made to alter the proportions of various components and regulate molecular weight of the polymer in Lauer et al 's coating composition as a matter of routine optimization and arrive at the instant invention in the absence of criticality or unexpected results.

9. Claim 40 is rejected under 35 U.S.C. 103(a) as being unpatentable over Kress et al (US 4, 895, 898) in view of Suetterlin et al (US 4, 513, 118) and Lichtenstein et al as applied to claim 30 above, and further in view of NieSsner et al (US 2001/0007890 A1).

The discussion with respect to Kress et al in view of Suetterlin et al and Lichtenstein et al in paragraph 7 is incorporated herein by reference.

The prior art is silent with respect to the addition of mold release agents such as stearyl alcohol.

However, NieSsner et al teach the addition of additives such as lubricants and mold releasing agents (paragraph 0106) to molding compositions of styrene comprising comonomers such as methyl methacrylate, maleic anhydride (paragraph 0019 – 0024). Examples of suitable lubricants and mold releasing

agents are stearyl alcohol (paragraph 0107). Therefore, it would have been obvious to one skilled in the art at the time invention was made to add lubricants and mold releasing agents such as stearyl alcohol to the composition of Kress et al in view of Suetterlin et al and Lichtenstein et al because NieSsner et al has proven successfully the addition of lubricants and mould release agents such as stearyl alcohol to molding composition and one of ordinary skill in the art would expect the addition of lubricants and mould release agents such as stearyl alcohol to work for the molding composition of Kress et al in view of Suetterlin et al and Lichtenstein et al, motivated by expectation of success.

10. Claim 41 is rejected under 35 U.S.C. 103(a) as being unpatentable over Kress et al (US 4,895,898) in view of Suetterlin (US 4,513,118) and Lichtenstein et al (US 5, 621, 028) as applied to claim 24 above, and further in view of Parker (US 5, 252, 667).

The discussion with respect to Kress et al in view of Suetterlin et al and Lichtenstein et al in paragraph 6 is incorporated herein by reference.

The prior art is silent with respect to pelletized form of the moulding composition.

However, it is well known in the art of injection moulding to pre-extrude polymer blends to form pellets (column 8, lines 15-18) as taught by Parker. It is noted that a pellet is easier to transport and store as opposed to a powder or liquid. Therefore, it would have been obvious to one skilled in the art at the time invention was made to pre-extrude the polymer blends of Kress et al in view of

Suetterlin et al and Lichtenstein et al to form pellets, motivated by expectation of success and derive the ability to transport and store easily.

Conclusion

Examiner has considered the international search report. However, the "X" reference was not relevant to the application because the claims 1-23 have been cancelled.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Karuna P. Reddy whose telephone number is (571) 272-6566.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Wu can be reached on (571) 272-1114. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-

free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Karuna P Reddy
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